UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,083	09/08/2004	Robert Kline	5552550124009	8902

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EXAMINER
NOONAN, WILLOW W

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 November 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,7-9 and 21-36</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,7-9 and 21-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 September 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   The instant application having Application No. 10/507,083 has a total of 20

claims pending in the application; there are 5 independent claims and 15 dependent

claims, all of which are ready for examination by the examiner.

Oath/Declaration

2.   The applicant's oath/declaration has been reviewed by the examiner and is found

to conform to the requirements prescribed in 37 C.F.R. 1.63.

Priority

3.   As required by M.P.E.P. 201.14(c), acknowledgement is made of applicant's

claim for priority based on applications filed on March 11, 2002 (U.S Provisional Patent

App. No. 60/362,930).

Drawings

4.   The applicant's drawings submitted are acceptable for examination purposes.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1, 7-9, and 21-36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kasriel (U.S. Patent No. 6,721,780) in view of Desai (U.S. Patent No.

6,871,218), Codella (U.S. Patent No. 7,003,566), and Beyda (U.S. Patent App. Pub. No.

2003/0061451).

Regarding claim 1, Kasriel teaches a system for handling data requests from

mobile devices, the system comprising a memory operable to store data requests

received from at least one device. *See* Kasriel at col. 4, lines 36-38 ("The pre-download

statistics server includes ... a data memory"). Kasriel teaches that the system

comprises a state prediction module operable to access the memory and predict, a first

forecasted data request for a device based on the stored data requests. *See* Kasriel at

col. 2, lines 1-5 ("The web server maintains statistical information responsive to

requests for information made by users, to estimate which links between web pages are

most likely to be followed."). Kasriel also teaches that the system comprises a push

module operable to receive the first forecasted data request from the state prediction

module and in response request and receive first response data related to the first

forecasted data request and push the first response data for transmission to the device

over the network. *See* Kasriel at col. 1, lines 61-65 ("A web server maintains

information regarding which web pages are most likely to be requested by users, and

pre-downloads those web pages to associated web clients in advance of actual

requests being made by the user.").

However, Kasriel does not teach that the device is a mobile device on a wireless communication network. Desai does teach that the device may be a mobile communication device. *See* Desai at col. 4, lines 40-50. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a mobile device in Kasriel's system because Desai discloses a similar method for predictive and preemptive page caching for improved site navigation.

Further, Kasriel does not teach the push being performed on a periodic basis and independent of receiving a data request from the mobile device. Desai does teach that a push of predictive data may be performed periodically, independent of receiving a data request from the device. *See* Desai at col. 3, paragraph 2 ("and independently of any subsequent request for a second page of the Web site originating from the remote computer, preemptively carrying out a second sending step to send the remote computer one or more selected second page of the Web site based upon a prediction of a subsequent request by the remote computer, and/or a history of second pages of the Web site previously accessed by the remote computer").

Regarding claim 7, Kasriel teaches that the state prediction module is further operable to select prediction modes according to the Identified subset of stored data. *See* Kasriel at col. 2, lines 5-11 ("These rules can be responsive to statistical measures, to information about categories of users, to demographic information, to past behavior of specific users at the web site, or to other relevant factors.").

Regarding claim 8, Kasriel teaches that the prediction modes may comprise: an atomic mode that operates on stored data requests specific to the identity of user (*see*

Kasriel at col. 2, lines 8-11, "responsive to … specific users"); and a group mode that

operates on stored data requests specific to a plurality of users (*see* Kasriel at col. 2,

lines 8-11, "responsive to … categories of users"). Desai teaches that these users may

be mobile communication devices. *See* Desai at col. 4, lines 40-50.

Regarding claim 9, Kasriel teaches that the state prediction module is operable to

predict the first forecasted data request based on a Markov chain model. *See* Kasriel at

col. 5, lines 15-22 ("initial node, a final node, a transition from the initial note [sic] to the

final node, and a measure of a weighted probability of transition").

Regarding claims 21 and 26-28, Kasriel and Desai teach a method for use with a

communication device by which a user requests data from a server via a network and

receives the requested data from the server via the network, the method comprising the

following steps in the following order:

predicting, by the server, what data the user will request, based on historical

requests for the data, *see* Kasriel at col. 2, lines 1-5 ("The web server maintains

statistical information responsive to requests for information made by users, to estimate

which links between web pages are most likely to be followed.");

pushing, by the server, the data to the device without the user or the device first

requesting the data, *see* Desai at col. 3, paragraph 2 ("and independently of any

subsequent request for a second page of the Web site originating from the remote

computer, preemptively carrying out a second sending step to send the remote

computer one or more selected second page of the Web site based upon a prediction of

a subsequent request by the remote computer, and/or a history of second pages of the

Web site previously accessed by the remote computer");

storing, by the device, the data until the data is requested by the user; and

presenting, by the device, the stored data to the user if and when the user requests the

data, see Kasriel at col. 1, lines 61-65 ("A web server maintains information regarding

which web pages are most likely to be requested by users, and pre-downloads those

web pages to associated web clients in advance of actual requests being made by the

user.").

Regarding claim 22, Desai teaches, after the presenting step: sending, by the

device to the server, an indication of whether the user requested the stored data. See

Desai at col. 2, lines 56-65 ("The method may also include maintaining a history of the

user requested second documents and sending the history to the second computer").

Regarding claim 23, Desai teaches, before the pushing step, assessing the cost

effectiveness of pushing the data to the device without having first received a request

for the data from the user. See Desai at col. 9, paragraph 2.

Regarding claim 24, Desai teaches, in the storing step, the data is stored along

with an indication of when the data should be updated. See Desai at col. 7, paragraph

2 ("Those of skill in this art will recognize that many such mechanisms may be

implemented herein. For example, the entries in the cache 220 may be invalidated after

a specific time period has elapsed or by a specific date, to insure that the computer 218

does not display stale Web pages to the user from its cache").

Regarding claim 25, Beyda teaches that the predicting step predicts the data

being requested at a particular time of day, and the pushing step is performed in

response to that time of day arriving and not in response to receiving a request from the

user. *See* Beyda at p. 1, paragraph 11 ("The latency may further be reduced if the web

pages which are popular during a certain period is pre-loaded some time before the

'high-access period' begins"). It would have been obvious to one of ordinary skill in the

art at the time the invention was made to use this feature with Kasriel's and Desai's

systems because Codella teaches a similar system for predictive data caching. *See*

Beyda, *Abstract*

Regarding claims 29 and 32-34, Kasriel and Desai teach a method for use with a

communication device by which a user requests data from a server via a network and

receives the requested data from the server via the network, the method comprising the

following steps in the following order:

predicting, by the server, what data the user will request, based on historical

requests for the data, *see* Kasriel at col. 2, lines 1-5 ("The web server maintains

statistical information responsive to requests for information made by users, to estimate

which links between web pages are most likely to be followed.");

sending, by the server to the device, the data to the device, *see* Desai at col. 3,

paragraph 2 ("and independently of any subsequent request for a second page of the

Web site originating from the remote computer, preemptively carrying out a second

sending step to send the remote computer one or more selected second page of the

Web site based upon a prediction of a subsequent request by the remote computer,

and/or a history of second pages of the Web site previously accessed by the remote

computer");

storing, by the device, the data until the data is requested by the user, *see*

Kasriel at col. 1, lines 61-65 ("A web server maintains information regarding which web

pages are most likely to be requested by users, and pre-downloads those web pages to

associated web clients in advance of actual requests being made by the user.");

presenting, by the device, the stored data to the user if and when the user

requests the data, *see id.*; and

informing the server, by the device, whether the user requested the stored data,

see Desai at col. 2, lines 56-65 ("The method may also include maintaining a history of

the user requested second documents and sending the history to the second

computer").

Regarding claim 30, Desai teaches updating the probabilities based on the user's

browsing history. *See* Desai at col. 10, line 60-col. 11, line 7 ("the history may be

updated, optionally by adding or subtracting members from the list of previously

accessed pages of the history and/or by changing the weighting coefficients associated

with the constituent members of the history").

Regarding claim 31, Desai teaches that the predicting step takes into account the

cost effectiveness of pushing the data in determining which data to send in the sending

step. *See* Desai at col. 9, paragraph 2.

Regarding claim 35, Kasriel teaches that the state prediction module is operable

to predict the first forecasted data request based on a Markov chain model. *See* Kasriel

at col. 5, lines 15-22 ("initial node, a final node, a transition from the initial note [sic] to the final node, and a measure of a weighted probability of transition").

Regarding claim 36, Codella teaches limiting the predicted state to a maximum depth. *See* Codella at p. 15, lines 38-47 ("the 'depth' of the prediction can be configurable"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use this feature with Kasriel's and Desai's systems because Codella teaches a similar system for predictive data caching. *See* Codella, *Abstract*.

Response to Arguments

7.   Applicant's arguments with respect to claims 1, 7-9, and 21-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Willow Noonan whose telephone number is (571) 270-

1322. The examiner can normally be reached on Monday through Friday, 7:30 AM-5:00

PM EST.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Willow Noonan/   /Jeffrey C Pwu/

Examiner, Art Unit 2146   Supervisory Patent Examiner, Art Unit 2146